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Digital Badges at NATO School Oberammergau

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***Abstract**: ~~Please~~ As NATO School Oberammergau (NSO) is continuously looking into implementing new tools and methods in training and education. One area of recent activity has been in recognizing student's skills, competencies and achievements through the use of digital badges. In 2017 NATO School Oberammergau introduced digital badges to selected courses; however, the idea to reward students' accomplishments is not new. When NSO implemented the "Gender Sticker" earlier, in 2015, the first step towards a new way of recognizing students' efforts were made. While the "Gender Sticker", a special designed NSO sticker any student can earn who is successfully completing the ADL 169 (Gender Awareness) course online, was simply added to the classic NSO course certificates, the digital badges are an online recognition system. In addition to the traditional "Certificate of Completion", the NSO offers a digital badge for selected courses to students who met all course requirements. Currently digital badges at NSO are used to help quantify the amount of formal time spent in training, or by participation in a program. However, digital badges have the potential to bridge both formal and informal learning in NATO. So far NATO School Oberammergau is currently the only NATO Education and Training Facility to provide their students digital badges. In this this paper the authors will demonstrate some initial findings following the implementation of the Digital Badging Project by NATO School Oberammergau and recommendations for other military organizations that may be looking to implement similar programs.*

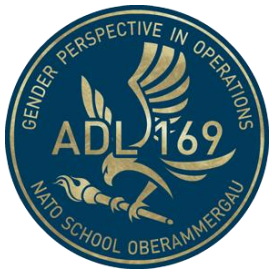
***Keywords:** Digital Badges; NATO School Oberammergau; NATO; Modernization; Recognition; Training and Education; Human Capital; Global Programming.*

I. BEFORE THE USE OF DIGITAL BADGES

In 2015, NATO School Oberammergau (NSO) began to ask itself how it could support the Alliances ambition to provide better awareness of gender perspectives in NATO operations. Acknowledging, understanding and working with a gender perspective means that NATO can account for the different security needs and priorities of men, women and children when planning and executing operations and providing relevant training and education is just one way in which the NSO could help to fulfil NATO's intent in support of UNSCR 1325 and related resolutions. One potential solution identified was to actively promote the use the online course, ADL 169 - Improving Operational Effectiveness by Integrating Gender Perspective, developed by ACT and partners. What happened next provided the momentum to move the the implementation of the digital badging programme at NSO forward.

At the start of 2016, the ADL office in conjunction with other staff at NSO undertook an active campaign of informing students that the ADL 169 course was available online prior attending the resident class. The premise was very simple, if the student arrived at the start of their course with a "certificate of online course completion" with them the school would annotate their course certificate

at the end of the course with an additional "sticker" highlighting that they had successfully attend the ADL 169 course. The inclusion of the ADL 169 "sticker" on course certificates provided a motivation factor that was not entirely anticipated. The completion rate of this online course increased from an average of 40% to over 80% with over 3000 course participants registered in the first year!



The idea of using digital badges at NATO School Oberammergau was first proposed in the M7-126 e-Learning Instructional Design Course by LCdr Remi Tremblay as part of a keynote presentation. During this presentation he explained that a digital badge is essentially a validated indicator of accomplishment that will enable students and instructors to share their credentials on social media websites such as LinkedIn, Facebook and Twitter, via email or embedded in a personal website, in a way that can be credibly verified. These badges provide the first step in transforming accreditation by allowing students to easily promoting their credentials and achievements to potential employers, colleagues, and friends.

II. WHAT ARE DIGITAL BADGES?

Digital badges are "digital tokens that appear as icons or logos on a web page or other online venue which are awarded by institutions, organizations, groups, or individuals, to signify accomplishments such as completion of a project, mastery of a skill, or marks of experience." (Casilli & Knight 2012). This construct is very familiar for those serving in a military environment as recognition for achievement in uniform can trace its way back to the ancient Egyptians who "used various forms of physical and tangible rewards to recognize bravery and military achievement." Digital badges provide a sharable record of achievement that can be displayed on social media and professional networking sites. It can be argued that they have more utility than the traditional course certificate presented by NSO as they contain information about what was accomplished to receive the badge (Devedzic and Jovanovic 2015). Elliot et al. (2014) also contend that "digital badges capture a more holistic, accurate picture of educational achievement in comparison to traditional degrees or certificates."

Digital badges offer several advantages especially useful in a military context. They can be associated with competencies that have been attained in pursuit of a qualification or certification and the amount of time needed to obtain the certification or qualification. They are also useful in documenting smaller formal learning accomplishments received outside of larger programs leading to an overall qualification or certification. It is true that NATO and by extension NSO cannot capture all the knowledge, skills and competencies that our graduates have obtain in preparation and during their NATO career but digital badging provides an important first step in detailing the development of competence over a larger number of learning accomplishments than is possible on an individual course level.

As outlined above NATO and NSO now have the potential to marry a certificate for attending a program at one of NATO's education and training facilities with real world performance where participants must meet a learning outcome, demonstrate their learning in some way, or meet certain criteria in order to receive a digital badge (Casilli & Knight 2012). From an NSO perspective there is also great value with respect to marketing (Finkelstein et al. 2013) as many students have positive perceptions of the digital badges finding them unique and innovative. Despite the many positive responses that the school has received, some students during initial presentations of the digital badging

concept had negative perceptions of the digital badges and questioned their value indicating that they would rather have the traditional certificate of completion.

III. THE NSO EXPERIENCE

As an institution recognized as the "Gold Standard" for education and training in NATO, NSO is continuously looking into implementing new tools and methods in training and education. Digital badging was identified as key enabler in helping NSO sustain its competitive edge and evolve the way that NSO currently recognizes a student's skills, competencies and achievements. Although the use of digital badges in military institutions is virtually unheard of, the advancement in the development of online platforms such as the Credly's Acclaim digital badging platform has made it relatively easy for organizations such as NATO School Oberammergau to be innovative.

Image: *Screenshot of NATO School Oberammergau organization profile on Credly's Acclaim platform.*

Since the start of the digital badge programme in summer 2017, the NSO has issued over 6000 digital badges to students from across the world attending over 80 different courses. Currently, over 60% of all NSO students sign up to receive a digital badge upon the successful completion of their course. NSO course graduates can claim and display their digital badge on any online platform. The NSO's digital badges are also portable and contain metadata which provides information about the issuing organization, the recipient, and evidence that substantiates the award of the badge.

Image: *M7-126 NATO eLearning Instructional Design course digital badge on Credly's Acclaim platform.*

Best Practices and Recommendations

Digital Badges Project managed currently by Gigi Roman, eLearning Coordinator together with Tanja Geiss ADL Chair, implemented a sustainable program within NATO School's Academic departments. A three phases program have been developed: Experimental, Implementation and Continuity phase.

During the Experimental phase, after the digital badge provider have been selected, the team have been working with Training Development Officer (TDO) and Course directors to identify digital badge metadata (e.g. Course title, description, skills, earning criteria) for the selected courses. Public Affairs Office have been also essential part from the beginning of the project contributing with digital badge design and providing proper content for social media presence.

Partner with a professional digital badge provider. As there are a multitude of professional organizations with technology platforms using industry standards for issuing digital badge it will not be difficult finding the right one for yours. A current list of digital badge providers is available on Instructional Management System (IMS) Learning Consortium here: https://www.imsglobal.org/cc/statuschart/openbadges.

Target Audience: who are your students or course participants?

Digital Badges Design: Including Instructional System Designer - ISD, Multimedia Designer - MMD, PAO, TDO course directors, instructors in the process of digital badge design will benefit easier project implementation and training the right people on digital badges management.

Social Media: consider working with your organization PAO on making sure that social media channels such as FB, LinkedIn, twitter exists and they are updated.

In the implementation phase, a courses database has been developed, to include all selected courses and the digital badge metadata for each course including digital badge graphics. The team continued working with Training Development Officer (TDO) and Course directors to identify digital badge metadata (e.g. Course title, description, skills, earning criteria) for the selected courses. This phase duration was one year, and resulted with a development of approximatively 80 digital badges course templates on the digital badge provider platform, 6000 digital badges issued. During this phase,

job aids have been developed and several hands on training sessions have been provided to familiarize academic staff with the issuing digital badge process.

The main part of the third phase of the digital badge program is maintaining sustainability of the project, where the team is continuing working training academic staff on issuing digital badges and it is also identifying new courses including developing digital badges for program of courses, e.g. Cyber Security Professional, NATO Certified Instructor. Other opportunities are issuing digital badges for selected online courses; consider digital badges for workshops and for achievements for NATO School Staff. The team is also looking into the blockhain technology that will allow publishing the badges on the blockchain, bringing an additional level of verification to the badges.

IV. NEXT STEPS

NATO's recent move to support education and training within the management framework of Global Programming is enabled through various disciplines within NATO each with a designated requirements authority (RA) and a department head (DH). Education Training Exercises and Evaluation (ETEE) is one such discipline under the Global Programming and NSO is currently acting as the department head working closely with other NATO Education and Training and Facilities (NETFs) Centers of Excellence (COEs) and Partnership Training and Education Centers (PTECs) in responding to NATO education and training needs.

Within this wider NATO context the idea of using and expanding the use of digital badges marries well with Allied Command Transformation (ACTs) recent focus on human capital in order to provide the best prepared people, at the right place, at the right time, every time to respond to rapidly advancing technology. Easily identifying the core knowledge, skill, and competencies of NATO personnel taking part in NATO operations and education and training available through the NSO digital badging initiative provides a ready baseline from which "to shape and enhance the knowledge, skills and attitudes of our personnel, ensuring that they are ready to meet the demands of tomorrow. This approach is the most direct path to our ultimate destination: excellence in operations" (ACT website 2019)

Currently digital badges at NSO are used to help quantify the amount of formal time spent in training, or perhaps by participation in a program. However, the use of digital badging in NATO has great potential outside the traditional classroom environment. They have the potential to bridge both formal and informal learning in NATO a facilitate a shift from attendance-based certificates to criteria-based accomplishments bolstered through real world performance during collective exercises.

Recent developments in the collection and analysis of learning data from collective training exercises such as Viking 18 provide the opportunity for the validation of digital badges issued as part of individual training activities. The link between individual skills and knowledge in support of collective performance can be bolstered by using quantitative observation data from the exercise management tool, with the aim of gaining insight on the relationships between training and performance against exercise objective (Presnall and Radivojevic, 2018). As (Ljung et al. 2018) identified connecting results from the pre-training phase with performance data from the execution phase is possible with the use of technologies such as xAPI. Investing into being able to do this at scale with data from multiple sources, visualized using a dashboard solution, will open up some really interesting possibilities for learning analytics in order to get even deeper insights into training needs and training outcomes.

V. CONCLUSIONS

The future of digital badging at NSO is open to a wide variety of possibilities whether in examining the links between individual training and education and collective performance or the democratization of education using evolving technologies such as blockchain and blockcerts. What is known is that there is much work to be done and many opportunities for continued research in this area.

Acknowledgements

Our Digital Badge provider is on Credly's Acclaim platform. Acclaim provides the expertise, tools and support you need to build an effective badge program. - https://www.youracclaim.com/issue-badges

NATO School Oberammergau Digital Badge Flyer is available here: http://www.natoschool.nato.int/portals/0/Files/2_Acad/20180718_NU_DigitalBadge_Flyer.pdf

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